

SPUTTER DEPOSITION USING MULTIPLE TARGETS**ABSTRACT OF THE DISCLOSURE**

In accordance with one specific embodiment of the present invention, an ion-beam deposition apparatus uses a plurality of stationary sputter targets so located so as to provide a predetermined thickness distribution of the target material on a substrate. This distribution is obtained without mechanical motion of ion sources, sputter targets, or a shaper located between the sputter targets and deposition substrate.

In accordance with another embodiment, a sputter deposition apparatus uses a plurality of targets, with sputter deposition from different targets initiated and terminated in a controlled manner so as to deposit a layered structure. This layered structure is obtained without mechanical motion of ion sources, sputter targets, or a shaper located between the sputter targets and deposition substrate.